

Grob
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ON

What is claimed is:

100-200-300-400-500-600-700-800-900

1. A photopolymerizable composition that is cured by exposure, comprising

(A) a polymerizable compound which is solid at 25°C and has at least one radical-polymerizable ethylenically unsaturated double bond in a molecule,

(B) a radical polymerization initiator, and
(C) a binder polymer.

2. The photopolymerizable composition of claim 1, wherein the polymerizable compound (A) is selected from compounds having a melting point or a glass transition point of no less than 40°C.

3. The photopolymerizable composition of claim 1, wherein the polymerizable compound (A) has at least one amide bond in a molecule.

4. The photopolymerizable composition of claim 1, wherein the polymerizable compound (A) is included in an amount of 10 to 60% by weight as a solid component.

5. The photopolymerizable composition of claim 1, wherein the radical polymerization initiator (B) has a maximum absorption wavelength of no greater than 400 nm.

6. The photopolymerizable composition of claim 1, wherein ultraviolet light having a wavelength of 400 nm or less

is used in the exposure.

7. The photopolymerizable composition of claim 6, wherein the radical polymerization initiator (B) includes at least one of benzyl, benzoin ether, Michler's ketone, anthraquinone, acridine, phenazine and benzophenone.

8. The photopolymerizable composition of claim 1, wherein visible light having a wavelength of no less than 400 nm, an argon laser or a YAG-SHG laser is used in the exposure.

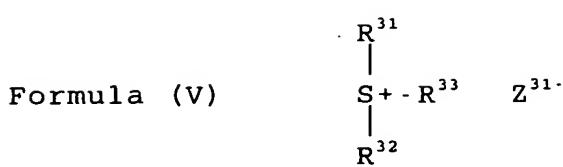
9. The photopolymerizable composition of claim 1, wherein the exposure is conducted with infrared light having a wavelength of no less than 750 nm.

10. The photopolymerizable composition of claim 1, wherein the exposure is conducted with an infrared laser.

11. The photopolymerizable composition of claim 9, wherein the radical polymerization initiator (B) comprises an onium salt.

12. The photopolymerizable composition of claim 11, wherein the onium salt comprises at least one represented by the following formulas (III) to (V):





wherein each of Ar^{11} , Ar^{12} and Ar^{21} independently represents an optionally substituted aryl group having no more than 20 carbon atoms; each of Z^{11} , Z^{21} and Z^{31} independently represents a counter ion selected from the group consisting of a halogen ion, a carboxylate ion, a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion and a sulfonate ion; and each of R^{31} , R^{32} and R^{33} , which may be same or different, represents an optionally substituted hydrocarbon group having no more than 20 carbon atoms.

13. The photopolymerizable composition of claim 1, wherein the radical polymerization initiator (B) is included in an amount of 0.1 to 50% by weight based on the total solid content of the photopolymerizable composition.

14. The photopolymerizable composition of claim 1, wherein the binder polymer (C) includes an acrylic resin or a methacrylic resin having on a side chain thereof a benzyl group or an allyl group and a carboxyl group.

15. The photopolymerizable composition of claim 1, wherein the binder polymer (C) has a weight average molecular weight of 10,000 to 300,000, a number average molecular weight of 2,000 to 250,000 and a degree of polydispersion (weight average molecular weight/number average molecular weight) of

1.1 to 10.

16. The photopolymerizable composition of claim 1,
wherein the binder polymer (C) is a random polymer.

17. The photopolymerizable composition of claim 1,
wherein the binder polymer (C) is included in an amount of 20
to 95% by weight based on the total solid content of the
photopolymerizable composition.

18. The photopolymerizable composition of claim 1,
further comprising (D) a compound generating heat by infrared
exposure.

19. The photopolymerizable composition of claim 9,
further comprising (D) a compound generating heat by infrared
exposure.